

# United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

	APPLICATION NO.	F	ILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
	10/687,519		10/16/2003	Van N. Truskett	P75-17-03	5222
	25108	7590	04/25/2006		EXAMINER	
	MOLECUL		RINTS	CHEN, BRET P		
PO BOX 81536 AUSTIN, TX 78708-1536			-1536		ART UNIT	PAPER NUMBER
, , , , , , , , , , , , , , , , , , , ,				1762		
					DATE MAILED: 04/25/2006	

Please find below and/or attached an Office communication concerning this application or proceeding.

-	
Δ.Λ	
1 · W	۰
"	

-		Application No.	Applicant(s)						
		10/687,519 TRUSKETT ET AL.							
	Office Action Summary	Examiner	Art Unit						
	•	B. Chen	1762						
Period fo	The MAILING DATE of this communication apport	pears on the cover sheet with the c	orrespondence address						
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).									
Status									
1)	Responsive to communication(s) filed on 21 F	ebruary 2006.							
•	·	action is non-final.							
3)	Since this application is in condition for allowa		esecution as to the merits is						
closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.									
Disposit	ion of Claims								
4)🖂	Claim(s) <u>1,2,4-19 and 26-28</u> is/are pending in	the application.							
-	4a) Of the above claim(s) is/are withdrawn from consideration.								
5)	Claim(s) is/are allowed.								
6)⊠	Claim(s) <u>1,2,4-19 and 26-28</u> is/are rejected.								
7)	Claim(s) is/are objected to.								
8)[	Claim(s) are subject to restriction and/o	or election requirement.							
Applicati	ion Papers								
9)[	The specification is objected to by the Examine	er.							
10)	The drawing(s) filed on is/are: a) acc	epted or b) objected to by the I	Examiner.						
	Applicant may not request that any objection to the	drawing(s) be held in abeyance. See	e 37 CFR 1.85(a).						
	Replacement drawing sheet(s) including the correct	tion is required if the drawing(s) is ob	jected to. See 37 CFR 1.121(d).						
11)	The oath or declaration is objected to by the Ex	kaminer. Note the attached Office	Action or form PTO-152.						
Priority ι	under 35 U.S.C. § 119		·						
12)	Acknowledgment is made of a claim for foreign	priority under 35 U.S.C. § 119(a	)-(d) or (f).						
	☐ All b)☐ Some * c)☐ None of:		, (-, -, (-,						
	1. Certified copies of the priority document	s have been received.							
	2. Certified copies of the priority document	s have been received in Applicati	on No						
	3. Copies of the certified copies of the prio								
	application from the International Burea	u (PCT Rule 17.2(a)).							
* 5	See the attached detailed Office action for a list	of the certified copies not receive	ed.						
	<u>.</u>								
Attachmen	nt(s)								
1) 🛛 Notic	e of References Cited (PTO-892)	4) Interview Summary	(PTO-413)						
	te of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Da	ate						
	mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) er No(s)/Mail Date	6) Other:	ratent Application (PTO-152)						

#### **DETAILED ACTION**

Claims 1-2, 3-19, 26-28 are pending in this application. Amended claims 1, 10-11, 16-17; canceled claims 3, 20-25; and newly added claims 26-28 are noted. It should be noted that newly added claims 26-28 were renumbered under Rule 126.

The amendment dated 2/6/06 has been entered and carefully considered. The examiner appreciates the amendments to the abstract, title, and claims. In view of said amendment, the objections, the previous 112 rejection, and the art rejection have been withdrawn. In addition, in view of the arguments presented on p.12, the obviousness double patenting rejection has been withdrawn.

### Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2, 3-19, 26-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 1, the applicant requires a diamond-like composition which minimizes adhesion to a material in contact therewith. However, the specification does not enable one skilled in the art to determine what materials would have minimized adhesion. For example, applicant has argued that the prior reference, Nguyen, has a diamondlike carbon material on a substrate which

Art Unit: 1762

increases adhesion (p.11). If that is the case, then the examiner questions which materials would have increased adhesion and which material would have minimized adhesion. The same issue applies to claims 10 and 16.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2, 3-19, 26-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the limitations of "to minimize adhesion to a material in contact therewith" is vague and confusing as there is no material in contact with the diamond-like composition. The same issue applies to claims 10 and 16.

In addition, in claim 1, if the diamondlike carbon layer is between a material and a template, it appears that adhesion would inherently be minimized between the material and a template as they do not touch each other. It is the examiner's position that no contact between materials is the ultimate in "minimized adhesion". The same issue applies to claims 10 and 16.

#### Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-2, 3-19, 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Westmoreland (6,607,173). Westmoreland discloses a method of forming a film on a

surface of a mold during semiconductor device fabrication (col.1 lines 15-19) in which a diamondlike carbon release material is deposited on a mold surface (col.4 lines 29-34). The diamondlike carbon material can be deposited by CVD or sputtering (col.4 lines 35-46) and possesses the ability to allow ultraviolet light to pass through (col.5 lines 40-42). A quartz window is utilized as part of the mold apparatus (col.5 lines 25-42). However, the reference fails to specifically teach a template.

It is well known in the art that a mold is utilizes to form a piece being made. One skilled in the art would realize that a template is utilized as a guide to do the same process. The skilled artisan would desire a template which did not accumulate material as the template can be utilized repeatedly. Hence, the use of a releaseable material would be desirable for a template. It would have been obvious to one skilled in the art to utilize the process of Westmoreland to form a template with the expectation of obtaining the same benefits.

In claim 2, the applicant require the use of diamond nanocomposites. Westmoreland clearly teaches the use of a diamondlike material, regardless of its size, and hence reads on the cited limitation in the absence of a showing of unexpected results.

The limitations of claims 4-19, 26-28 have been addressed above.

## Response to Arguments

Applicant's arguments with respect to claims 1-2, 3-19, 26-28 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 1762

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to B. Chen whose telephone number is (571) 272-1417. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bc 4/14/06

BRET CHEN
HEMARY EXAMINER